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Tariff Favors Foreign Textile Machinery

Inflation Is Subsiding

President Kubitschek Says Its Rate Has Decreased From 18 to 7%

Brazilians have been told recently that the rate of inflation is now falling. This is most welcome news to a country whose rapid expansion has been accompanied by a rise in living costs.

Noted in December

The first news of the changing rate was announced by President Kubitschek in an interview which he gave the press on December third. At that time he announced that the rate of increase in the cost of living had fallen from eighteen to seven per cent. He added that when Brazil has contained the rise in the cost of living it will have valorized the cruzeiro.

Shortly after the Chief Executive spoke, the Director of the Division of Labor and Social Assistance's statistical service, Sr. Nirceu da Cruz Cesar, affirmed that his data bore out the Presidential statement.

Federal District Figures

In an end-of-the-year statement Dr. Kubitschek once again referred to the cost of living index when he stated that in the Federal District the rise in the price level for consumer items was 7.04 per cent for the period from January 1 to November 30. This contrasts with 23.76 per cent for the like period of 1956.

Economists of the Chase Manhattan Bank in their recent study, "Latin American Business Highlights," agree that inflation has slowed down. They see as the prime inflation cause "a large increase in money and credit."

Belo Horizonte Anniversary

Belo Horizonte, capital of the State of Minas Gerais, celebrated its sixtieth anniversary last month. The festivities were presided over by Governor Bias Fortes, whose father, Crispim Jacques Bias Fortes, inaugurated the city on December 12, 1897. This all-planned city now boasts a population of 520,000. In the little more than half a century of its existence Belo Horizonte has become the fourth metropolis of Brazil, taking its place along side of Rio de Janeiro, São Paulo and Pôrto Alegre. Mayor Celso de Mello Azevedo claims that the city's population growth is the highest in the country, 5.34 per cent, greater than São Paulo's 5.276 per cent. The photo shows the Seventh of September Plaza, in the center of town.

Atlas-Grassi-Harrington-Marmon Set To Ship First of 415 Trolley-Buses

They Are 85 Per Cent Made Of National Parts; Are To Go to Six Cities

The "year of the automobile" in Brazil is getting off to a very auspicious start. The association of the firms Atlas-Grassi-Harrington-Marmon is readying the first of the 415 trolley buses which it is manufacturing in its São Paulo plants for shipment to six cities where they will join urban and interurban transportation fleets there.

Cities Listed

The cities to which these vehicles will be shipped are Pôrto Alegre, Recife, Belo Horizonte, Piracicaba and Araraquara. They are of 85 per cent national manufacture. This is the percentage of component parts made in Brazil.

The firm, which is turning out the first such units in Brazil in quantity, represents a merger of Brazilian and North American interests. The contract starting the venture was signed in the offices of the Brazilian Government Trade Bureau in New York.

Lower Duties In New Law

More Profitable to Export Textile Machinery Now, GATT Delegate Says

It is more profitable to export textile machinery to Brazil under the new 1957 tariff, Sr. José Otávio Knaak, a textile expert with the Brazilian delegation to GATT, is reported to have told a representative in Geneva of the Fairchild News Service recently.

Negotiations Beginning

GATT is the organization of the General Agreement on Tariffs and Trade. On February 3 the beginning of negotiations among the contracting parties which comprise GATT will be undertaken relative to the new Brazilian tariff law. A waiver had been granted Brazil to formulate a new tariff law in 1956, and the negotiations about to take place were authorized by the twenty-three participating countries on November 16.

In discussing the new law, Sr. Knaak affirmed that lower ad valorem duties and especially favorable currency rates made Brazil a more attractive market under the new tariff schedules which have replaced those of the older statute.

Some at Ten Per Cent

"The Brazilian ad valorem rate on some types of textile machinery runs as low as ten per cent. But the average duty on textile equipment is under forty per cent," Sr. Knaak added. Equivalent duties were higher under the old tariff schedules.

It is known that many Brazilian textile plants are in need of more up-to-date machinery.

Scheelite Mining Important to Rio Grande do Norte

The Ore Yields Tungsten Metal

Needed Wonder Metal Has Highest Melting Point; Is Non-Corrosive

One is in for a pleasant surprise as he crosses to the hot hinterlands of Rio Grande do Norte and comes on a modern oasis in the semi-desert. It is Currais Novos, Brazil's capital of scheelite. In the midst of a region where it often goes a year without rain, the traveler will find a modern hotel with running water and *grumixáma*, a tropical fruit sherbert that is out of this world.

Extracting Scheelite

Almost 200 kilometers from the port of Natal, Currais Novos, once a cattle and cotton town, has come to life again with the discovery and development of rich deposits of scheelite ore. This mineral has, to a great extent, been replacing cotton as the chief factor in the economy of Rio Grande do Norte.

Scheelite is chemically calcium tungstate, and its value is in relation to the amount of tungsten that it contains. Tungsten is commercially important chiefly because it has the highest melting point of any metal and is highly resistant to corrosion. It is used in the manufacture of both military and non-military materials.

Production Raised in 1942

Up to 1942 this ore was exported from this area in small quantities, but with the advent of World War II and the subsequent inaccessibility of Asian markets, the mining of Brazilian scheelite was taken up on a large scale. In 1942, even without proper technical equipment, production of scheelite was stepped up considerably. This was due mainly to the pioneering initiative of Tomás Salustino, whose name is closely linked to scheelite and the growing prosperity of Currais Novos.

In the post-war period, scheelite production has continued to increase, and interest in its development has been high. Foreign companies have sent technicians into the Northeast to discover new veins of the ore, and new equipment has been installed. One of the chief companies exploiting the region is Mineração Wahchang S.A., a subsidiary of the Wah Chang Corporation of New York.

Outlook Promising

The outlook for scheelite production in the area of Currais Novos is for a regular, controlled production geared to meet world demand. The recovered tungsten is used in high speed steels, in the making of lathes, electric bulb filaments and a host of other products.

Install Steam-Generating Equipment In Charqueadas Using Local Coal

Rio Grande do Sul Thermal Unit Is Adapted for Coal Of Low Caloric Count

A power development of extreme interest is being watched closely in the steam-generating electric plant of Charqueadas, in the State of Rio Grande do Sul. If the new equipment installed there works satisfactorily, the low-grade coking coal found in the southern region of Brazil will have a new and abundant use.

Rio Jacuí Town

Equipment from the West German firm of Allgemeine Elektricitaets Gesellschaft is already in the process of installation in the generating station at Charqueadas, a town on the Rio Jacuí, just west of the mouth of the Rio Taquari and connected by water transportation with the city of Rio Grande.

The first group of turbines will be ready sometime in 1958 and will have a capacity of 15,000kw. When the two other turbines are put into operation, the plant will have a total capability of 45,000-kw.

2800 Calories Per Kilo

What is noteworthy about this project and is making it a closely watched one by power experts is that its furnaces will use, after crushing, coking coal of only 2,800 calories per kilo. Up to now coking coal of this quality was considered as commercial waste and of unusable quality.

There are huge deposits of coal of low-thermal output throughout the State of Rio Grande do Sul, and finding commercial use for this heretofore waste product will be a boon to the mining regions of Rio Grande do Sul.

Commercial Standard

Commercial coal in Brazil usually runs from 5,000 calories per kilo upward. A good deal of coal is still imported, most of it coming from the United States and Europe.

S. PAULO OPPORTUNITIES

The Secretary of Labor, Industry and Commerce of the State of São Paulo has prepared for the Governor a report on municipalities offering attractive facilities to business wishing to establish there. These include tax exemption for a number of years, available electric power, banking facilities and transportation.

COFFEE CONFERENCE TO CONVENE IN RIO

An eight-day meeting of coffee-producing countries will open in Rio de Janeiro on January 20. The parley has been called to form an international coffee organization. Representatives from Brazil, Colombia, El Salvador and Nicaragua have completed a preliminary draft of an agreement to this end.

Besides the representation from the coffee-producing countries, there will be observers from many consuming countries at the session. Among the aims of the proposed organization will be a world-wide promotional campaign to increase consumption, the creation of an international forum for the discussion of coffee problems and the protection of the industry.

As the world's leading coffee producer, Brazil has been active in attempts to bring back stability to the international coffee markets.

Mogi das Cruzes Prosperous Town

Municipality in São Paulo State Has a Population of 61,553 Inhabitants

Some fifty kilometers from the city of São Paulo and in the state of the same name lies the thriving town of Mogi das Cruzes. At the time of the last census, that is, in 1950, Mogi das Cruzes recorded a population of 61,553 inhabitants and numbered somewhat more than two hundred industrial plants, the largest being the Mineração Geral do Brasil, owned by the Jafet brothers.

Large Steel Plant

This plant of the Jafet brothers is the third largest steel producer in Brazil and the first manufacturer of Mannesman tubes.

The assortment of other industries in Mogi das Cruzes is wide. Schwartzmann pianos are made there, as are Elgin Sewing Machines. There are wool and silk plants as well as textile factories. Ceramics are formed and fired in this busy town, and automotive parts—always in large demand—are made there, too.

Paper Making

At least three paper manufacturers, Leon Feffer, Papel Simão and Bandeirantes, operate in Mogi das Cruzes. Griffiths Laboratory is the outstanding representative of the pharmaceutical industry. Tanneries, metal stamping and many other lines of endeavor are active employers in this town.

Now six other large groups have plans for establishing factories in the vicinity of Mogi das Cruzes. These include Metalúrgica Matarazzo, Westinghouse and Siam.

Currently the minimum salary here is Cr$3,200. The signs of prosperity in this town, which lies between São Paulo and Rio de Janeiro, are evident. There are, however, many other municipalities in the State of São Paulo which offer similar opportunities.

The Proud Record of Brazil's Commercial Aviation

Second in World In Mileage Total

The Trade Bureau Director Talks to Travel Writers On Air Achievements

"Destination Brazil" was the theme of the American Travel Writers' Association meeting in Washington on January 3. Guest of honor was His Excellency Ernani do Amaral Peixoto, Brazilian Ambassador, who greeted the group.

The principal address was delivered by Mr. Francisco Medaglia, chief of the Brazilian Government Trade Bureau in New York, who spoke on the achievement of Brazilian commercial aviation. Significant portions of his address follow:

Partial Text

Exactly twenty years ago, in 1938, Brazilian commercial aviation carried 63,423 passengers and less than one half million tons of freight. By 1956 Brazilian airlines transported 3,200,000 passengers and some 71 million tons of freight. Comparing the two years as to the miles traveled, a mileage of 4,350,000 in 1938 skyrocketed to 75,700,000 by 1956. In terms of world air traffic, Brazil ranks second as to total miles and freight-miles flown, and sixth in passenger miles.

Brazilian aviation—and in this I must include military aviation, which has been an unforgettable pioneer in that field since the heroic days when the air-mail service was organized — today services the entire country. As vast as Brazil's territory is, there is no corner over which our planes do not fly in spite of the distance.

The network of air fields, with the latest equipment, makes contact possible with even the most remote parts of the country, lopping off distances, eliminating difficulties, solving problems earlier considered insoluble, and most important of all, strengthening the ties of national unity.

Huge Distances to Cover

Dealing as we are with a country larger than the United States, we could do little to promote tourism if we could not avail ourselves of the splendid facilities of Brazilian aviation. We all know how just a few years ago it was an adventure involving even personal risk to reach Manaus, capital of the State of Amazonas, not to mention the time it took to get there.

Today, the traveler who wishes to feel the throbbing heart of the jungle in all its mystery and majesty, who wishes to gaze upon the mighty Amazon River and observe at close quarters the tropical vegetation which surrounds it, can in a few hours of comfortable air travel touch down at the queen city of the Amazon, find quarters in a very modern hotel in Manaus—a piece of construction made possible through the advent of aviation and the establishment of regular service to that region — and without the slightest fatigue set out on a magnificent tropical adventure. And when he is finished there are closely scheduled air trips to take him back to his starting point.

The same is true of the fabulous falls at Iguaçú, in the western part of the State of Paraná. Its beauties, its imposing majesty, are certainly not unknown to you whose work concerns the promotion of travel. Today, anyone who wishes to see anything of Brazil and to know more than its enchanting cities must see Iguaçú Falls. Travel by air there is rapid and comfortable and provides a breathtaking introduction to this unique spectacle of nature.

Contrasting Civilizations

If the tourist has artistic and historical interests and wishes to know something of Brazil's past, let him visit Ouro Preto. In an hour he will be flown from Rio de Janeiro to the capital of the State of Minas Gerais, the city of Belo Horizonte, and in another hour by car he will be brought face to face with two contrasting civilizations: the new skyscraper development of Belo Horizonte, cradle of modern functional architecture in Brazil, and the colonial and religious art of Ouro Preto, where Aleijadinho carved his magnificent sculptures and where a thousand remnants of a glorious past leave a record of great statesmen, heroes of liberty, poets and the muses who inspired them.

Nor must we forget Bahia of All the Saints and, as Gilberto Freyre reminds us, "of all the sins." No discriminating tourist will pass it by, for its gentle magic entrances all who come to it, and those who know it well say that here is the most typical place in Brazil, and with its most traditional food.

To give an idea of the extent of some of the domestic Brazilian

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Travel Writers Are Hosts to Brazilian Officials

Mr. Walter Hubbard, standing, president of the Washington chapter of the American Travel Writers' Association, is about to introduce the gentleman on his left, Mr. Francisco Medaglia, head of the Brazilian Government Trade Bureau in New York, the principal speaker at the luncheon of the Association dedicated to Brazil. At Mr. Hubbard's right is His Excellency, Ambassador Ernani do Amaral Peixoto. At the extreme left of the photograph is Minister Henrique Vale, at the extreme right is Secretary Maury Gurgel Valente. With his back to the camera is Mr. Luiz O. da Silva, Washington manager for REAL Airlines.

Once Prosperous Rubber Growing Is Being Revived

Brazil Encouraging New Plantations And Cultivation Interest Southward

Growing Auto Industry Will Need More Natural Rubber for Its Tires

Brazil, the cradle of rubber culture, is hungry for rubber. With the number of automobiles and trucks operating in the country speeding ahead from year to year, the quantity of rubber needed for domestic consumption has far out-stripped production, so that in 1957 about 37,000 tons of rubber were used while only about 10,000 tons were grown in the country.

1960 Estimate

This has been the stationary level of production for the past few years. When national consumption was only 4,612 tons in 1949, Brazil was still a net exporter. That the need is a growing one can be seen in the estimate that about 85,000 tons will be required by 1960.

New rubber tree plantings are being made, largely of improved grafted varieties with the purpose of meeting the fast growing need. As an encouragement to the production of natural rubber, a bill has been introduced into the Chamber of Deputies of the National Congress to forbid setting up any synthetic rubber factories for ten years.

Integrated Plantation

The Firestone Tire and Rubber Company is in the process of establishing a three-thousand-acre rubber plantation near Ituberá, State of Bahia, close to the coast and somewhat south of Salvador, which is being planted with high yielding rubber trees. The aim of the plantation is to supply the company's tire factory in São Paulo, 1,400 miles to the south, as well as other plants in Brazil.

Plans call for a yield of latex from these trees by 1962. The permanent work force is expected to number a thousand. Across the Rio Serinhão from the plantation, liquid latex will be preserved for shipment or coagulated and processed into sheet rubber in a Firestone plant.

By Boat to Santos

From this factory the rubber will go by truck five miles to Ituberá where the company has a warehouse, thence by small boats to Salvador, where it will be loaded into larger ships to go to Santos, port for São Paulo.

But how did the pioneer rubber producing nation develop this lack?

Rubber was first sent to Europe from the Amazon region by a French scientist travelling through the tropics between 1734 and 1744. The name of Pará early became associated with rubber and with the tree *Hevea brasiliensis*. Investigations of the properties of latex were recorded by the English scientist, Dr. Joseph Priestley, in 1770.

With the transfer of the Portuguese court to Rio de Janeiro during the Napoleonic Wars, the opening of the ports of Brazil to the trade of all nations and the independence of Brazil in 1822, the hold of the mercantile system upon the former Portuguese colony was broken. Rubber shoes manufactured by the Pará Indians were shipped abroad in 1823, and by 1835 such shipments amounted to hundreds of thousands of pairs annually.

Vulcanizing Discovery

The first great stimulus was given to modern rubber manufacturing by Charles Goodyear's invention in 1839 of the vulcanization process, which transformed the smoke-coagulated latex from an unstable substance subject to alternate liquefaction and hardening depending on the weather, to a product of permanently firm texture and uniform elasticity. As a result, the demand for rubber goods increased, and production of raw rubber was greatly stimulated throughout the tropical belt.

The invention and development of pneumatic tires, first for bicycles and later for automobiles, gave the greatest impetus to rubber production during the period 1890 to 1912, setting off the African rubber boom. The years of the first World War saw the rise of the Far Eastern plantations to the position of pre-eminence in rubber production.

Amazon Prosperity

In 1853, approximately five million pounds of rubber were exported from Brazil by way of Pará. The period from 1890 to 1914 was the boom era in South American rubber. Brazil alone exported 32,000 tons in 1903, while world production had been only 29,000 tons just thirteen years earlier. World consumption reached 50,000 tons in the later year.

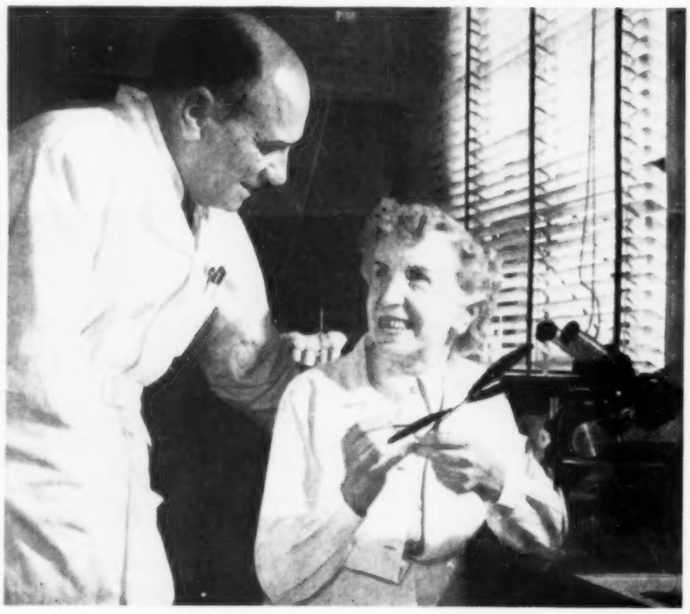
A startling course of inflation and deflation expanded the population of Belém, capital city of the State of Pará, from 97,000 in 1900 to 236,000 in 1920, while the formerly sleepy river town of Manáus, in the center of the Amazon river valley almost a thousand miles up river from the coast, became the second wild-rubber capital of the world with a million-dollar opera house, a street-railway system and a complete assortment of the then latest improvements. The entire labor force of the Amazon valley and as much more as could be brought in from other parts of Brazil, principally Ceará, busied themselves with rubber tapping, abandoning subsistence farming and importing foodstuffs at fancy prices. At this time rubber was the most profitable extractive activity in the country.

By 1920 world production of rubber totaled 304,816 tons, to which Brazil contributed only 30,790 tons. A rubber conservation plan sponsored by the Federal Government, well adapted to aid and revive rubber production, could not be continued for lack of funds. Oriental rubber accounted for 90 per cent of world production in 1927; Brazil and Peru provided the remaining 10 per cent.

"Hevea Brasiliensis"

It was seeds of the *Hevea brasiliensis*, smuggled out of Brazil and germinated in England, that were first planted in the Ceylon and later widely distributed throughout the Orient. The lands most suitable for rubber-growing lie within a zone extending for 20 degrees on either side of the

Rubber Tree Disease Checked



The rubber trees of Brazil have had to contend with anthracnose, a disease of its leaves, producing ulcer-like lesions and caused by several species of fungi. In the photograph above Dr. Anna E. Jenkins, a plant pathologist from the United States, is showing Dr. A. A. Bitancourt, of the Biological Institute of São Paulo, some of the results of her researches into this damaging disease. Sent to Brazil under the Point-Four Program, Dr. Jenkins has succeeded in isolating the cause of the disease which infects the Amazon rubber trees.

Grafting a Rubber Tree

This young rubber tree has been grown from seed. An incision is made in the bark of the sapling, and the bud tissue from a high-yielding clone, or hybrid tree, is placed under the bark. The bark is then pressed back into place, covering the bud, and the incision is spirally wrapped with especially prepared bandage. If the bud-grafting is successful, the bud will take root and grow out of the sapling, which is then cut off about six inches above the bud. The bud, as it grows, becomes the new trunk of the tree.

Equator, and the chief world rubber areas, past and present, have been within this belt.

The best known of the rubber plants and the one which accounts for most of the rubber of commerce is *Hevea brasiliensis*, a native of the Amazon basin. Wild *Hevea* trees, which may attain a height of 100 feet or more and a girth of 16 feet, may be tapped after 10 or 20 years of growth. Four pounds of dry rubber a year is considered to be a good average yield for a mature wild *Hevea*.

Tapping the Trees

The Amazonas knife, or the Jebong knife from the Far East, of which the former is an adaptation, is the present tool used for tapping. With one of these modern tapping knives the skilled worker can make a series of incisions just deep enough to obtain the maximum amount of latex from each tree, without injuring the cambium or primary growing layer of the tree, which lies between the bark and the wood.

Starting about four feet up the trunk, cuts are made diagonally half-way round the tree to a vertical channel cut in the bark to the base of the tree, where a small cup catches the slowly oozing latex. On alternate days a new incision is made just below the last one, and when the tapper has thus gradually worked his way down to the base of the trunk, the bark has had time to renew itself over the first incisions made at the top, and the process can start over again without interruption in the tapping.

The flow stops about an hour after the incision has been made, and by noon the tapper or *seringueiro* (from *seringa*, an early Portuguese word for rubber) has finished collecting the contents of the cups from all the trees he has tapped that morning. The afternoon he spends coagulating the thick, milky sap. He builds a fire in a tent-shaped hut, using palm nuts that make an extremely dense smoke for fuel. The tapper holds a pole dipped in the latex over the smoke and gradually pours on fresh sap with a cup as each thin layer hardens.

This process continues for several days, until a ball of black rubber, weighing around 100 pounds, has been formed. Then it is ready for shipment down the river to the exporting center.

New Improvements

Two major improvements which have been instituted in rubber growing and collecting have been the development of new clones, bud-grafted offspring of seedlings selected for their high yield, and the use of the tapping knife instead of the hatchet to prevent injury to the trees and to allow the collection of more latex.

Important among the rubber-producing trees of the Western Hemisphere are the various species of *Castilla*, familiarly called *Castilloa*. There are also two native Brazilian latex-bearing trees that grow in the dry coastal lowlands in the vicinity of Ceará: the maniçoba (*Manihot glazovii*), related to the tapioca plant, and mangabeira (*Hancornia speciosa*), which produces edible fruit that is considered a delicacy.

When World War II cut off the supply of oriental rubber to the Allies, the United States inaugurated an intensive three-fold program to conserve existing rubber supplies, tap all available sources in the Western Hemisphere and rehabilitate the rubber-growing industry in this hemisphere with the cooperation of the various governments concerned.

In Short Supply

The program had the desired effect of increasing the production of crude rubber, of which all above an amount held for domestic consumption was to be sold to the United States. But rubber

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Young Rubber Trees, Plantation Grown

Here is a stand of rubber trees from six to nine years old ready to be tapped for the first time. These trees have been scientifically bred for speed of maturation, high yield and resistance to disease. *Hevea brasiliensis*, the commercially most important rubber tree, is a native of the Amazon valley. Its seeds later were grown in the Orient, but when re-introduced into Brazil the plant was found to be susceptible to a fungus disease, South American leaf disease. One of the purposes of bud-grafting is to develop a tree which resists this disease. When full grown, *Hevea brasiliensis* may attain a height of 100 feet or more and a girth of some 16 feet.

Improvement Set In Transportation

Railroads Get Large Loans For Needed Equipment In All Sectors

Brazil has signed a US$100,000,000 loan contract with the United States Export-Import Bank for the purchase of railroad equipment, according to a recent Associated Press dispatch. The loan, which goes to Rêde Ferroviária Federal, S. A., administrative agency for Brazil's twenty-two nationally owned railways, is a part of the US$151,000,000 credit authorized in 1956.

Diesels Included

It will provide for the purchase, among other things, of 165 diesel electric locomotives, rolling stock of a type not manufactured in Brazil, and signaling equipment. Brazil already is understood to have entered negotiations with United States concerns for the locomotives and is asking speedy delivery.

Additional Loans

According to *Notícias*, weekly digest of hemisphere reports, several contracts totaling Cr$3,000,000,000 have been signed between the National Railway System and the National Bank for Economic Development for the re-equipment of the Central do Brasil, Leste Brasileiro, Paraná-Santa Catarina, Leopoldina and the Cearense railways, based on studies made a few years ago by the Joint Brazil-United States Commission for the Economic Development of Brazil.

The loans to the Central do Brasil are reported to total Cr$2,024,000,000 and include provision for an increase of eighty-two suburban train units totaling 246 coaches. The Leopoldina will receive Cr$760,000,000. The other railroads will get lesser sums.

Earlier Loan

These loans, the *Notícias* report concludes, cover only part of the re-equipment program, inasmuch as the remainder is being financed by the US$100,000,000 loan granted by the Export-Import Bank in 1956, included within the first-mentioned credit going to Rêde Ferroviária Federal, S.A.

Brazilian News and Notes

JAPANESE JOIN BRAZIL TO SET UP STEEL FIRM

The Usiminas Steel Company, recently approved by President Kubitschek, to have a capitalization of US$130,000,000, will be owned forty per cent by a combine of Japanese steel concerns, including Yawata, and sixty per cent by the Brazilian Government. The Japanese will contribute to the new firm US$10,000,000 in cash, US$30,000,000 credit for the purchase of Japanese machinery. Brazil will contribute a small steel plant now making 45,000 tons of special alloy steels a year and a group of mines in the Vale do Rio Doce, the heartland of the Nation's proven ore reserves.

When the new factory is finished in 1963, it will be the second largest in the country, coming after Volta Redonda, and will have a yearly capacity of 500,000 tons. The Japanese have announced that technicians and the first US$2,000,000 of their investment will be in Brazil by this coming February.

CHRYSLER FACTORY PLANS APPROVED FOR 1958 BY GEIA

The Chrysler Motor Company will make its Plymouth Savoy in Brazil, according to plans approved by GEIA, Executive Group of the Automotive Industry. The factory will be the largest installed in the country and will produce six thousand cars containing sixty-five per cent national parts by the end of 1958.

During the coming year the British Rootes Motors will join a Brazilian firm in Rio Grande do Sul to produce automobiles. This news is reported by *Noticias*, Weekly Digest of Hemisphere Reports, which is published by the National Foreign Trade Council, Inc. with headquarters in New York.

BRAZIL-JAPAN RADIO CIRCUIT

The Companhia Radiotelegráfica Brasileira, "Radiobras", has established direct communications with Japan. This is the thirty-sixth direct circuit abroad of "Radiobras."

STAINLESS STEEL CARS TO BE MADE IN BRAZIL

A factory for the manufacture of stainless steel railway cars, the first such plant in Latin America, will be set up in Brazil by the Budd Company. Technical aid and possibly some capital will be added by Adams & Weslake of Elkhart, Indiana, railway and bus accessory suppliers, and Heywood-Wakefield of Gardner, Massachusetts, upholstery and furniture suppliers for buses and railroad cars.

BRAZIL'S PRODUCTIVITY FIRST IN LATIN AMERICA

According to a recent survey, the Brazilian economy produced US$13,500,000,000 of gross national product in 1956, making it rank first among Latin American countries and ninth in the Free World. This figure may be compared with US$8,340,000,000 of national output in 1946 and US$6,485,000,000 in 1939.

DE PAIVA VICE PRESIDENT OF KAISER INTERNATIONAL

Sr. Glycon de Paiva, former president of the National Economic Development Bank of Brazil, has been elected vice president of Kaiser Aluminum International and Kaiser Bauxite Overseas, both subsidiaries of Kaiser Aluminum and Chemical Corporation, the company which plans to produce aluminum in northeastern Brazil where bauxite is fairly abundant, using power from the Paulo Afonso installation.

MEETING SCHEDULED OF CULTURAL SOCIETY

The Brazilian Cultural Society is holding its next meeting on Thursday evening, January 16, at 8:30 p.m. at the Biltmore Hotel, Madison Avenue at 43rd Street. The program will include a lecture on Brazilian art and the Escola Nacional de Belas Artes in Rio de Janeiro. The speaker is to be Sra. Hylda Maranhão Estellita, outstanding Brazilian painter.

MANGANESE EXPORTS

In the first half of 1957 Brazil exported 299,405 tons of manganese ore. This was greater than the total for all of 1956.

Air Line Travel For Seeing Brazil

Convenient Transportation Is Scheduled in Flights Throughout Its Areas

(*From Page 3*)

airlines, it is sufficient to point out that the route between Pôrto Alegre, capital of Brazil's southernmost state, and Belém, in the extreme north of the country, is 3,090 miles in length. Incidentally, this route includes a magnificent view of Brazil's scenic shoreline line and a stop in Rio de Janeiro. By comparison it is five hundred miles longer than the distance between New York and San Francisco.

Planes Owned

In June, 1956, the Brazilian carriers owned two-hundred-and-fifty planes, with another fifty-six on order. These figures tell something of the progress of commercial aviation in Brazil and of its prominent place in aeronautics.

But perhaps it is more graphic to say that the Congonhas airport in São Paulo serves 1,200,000 passengers and services around one hundred thousand flights annually. This busy activity in the heart of Brazil's largest city is making it necessary to construct the Viracopos International airport in Campinas, a city already connected with São Paulo by a super-highway. Fifty-seven million cruzeiros has been set aside to start the building of this new airport. Naturally, the entire picture is not rosy; we also have problems to solve. One of the major problems is that of obsolescence brought on by the wear and tear of heavy traffic and technical advances. Another important item is the high cost of buying equipment from abroad as Brazilian industry is not yet able to supply such a demand.

Dedicated Staff

As we speak of the progress of Brazilian commercial aviation, we must not fail to mention the matter of North American collaboration as regards techniques and capital. But justice demands that we speak plainly of the

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Rubber Growing Is Being Revived

Country's Auto Industry Will Need More Natural Rubber For Its Tires

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manufacturing has been growing in Brazil, and she is no longer able to supply even her own needs, no less show a net export figure.

Experiments designed to improve the rubber-bearing trees of Brazil are being carried on. *Hevea brasiliensis*, which went to Ceylon by way of England, was brought back to the Amazon during World War II, but was found to be susceptible to a fungus known as South American leaf disease. North American technicians developed a unique tree during World War II that was resistant to the disease. A "three-component" tree, it consists of a Peruvian seedling rootstock, a Far Eastern panel clone and a Brazilian resistant top-clone or crown.

More recently a "bi-component" tree has been developed which consists of a seedling rootstock budded with a hybrid clone combining both yield and resistance. Its advantages are that the time the plant must remain in the nursery will be reduced by at least a year, production costs will be reduced by one-fifth and transportation costs will be less, since the plant is only a small budded stump instead of a tree. It is also easier to transplant and maintain in the field.

Growers' Goal

The goal of the rubber program is to produce a clonal seed that could be planted directly in the field, eliminating all budding and grafting in the nursery. This clonal seed would have to be produced by combining high-yielding and disease-resistant characters of selected parent trees.

It should be noted that the United States Department of Labor counts rubber as one of the twenty-two primary commodities for which a daily index is published. These commodities, all raw materials, are considered by that agency to be more sensitive reflectors of changes in demand or supply than the wholesale commodity price index put out by the same office.

There has been little change in the world output of natural rubber since 1950. The lowest production year during this period was 1953, when 1,728,000 tons were produced. The highest was 1,913,000 tons in 1955. The output for 1957 was very close to that figure, 1,910,000, compared with 1,875,000 tons in 1956.

World Use Data

World consumption of natural rubber has been slowly rising: 1,455,000 tons in 1952, 1,800,000 tons in 1956, 1,900,000 tons last year.

The average price for natural rubber (No. 1 ribbed smoked sheets) in New York has been declining: 39 cents in 1955, 34.3 cents in 1956, 29 cents in 1957. An explanation offered for the recent slip in price has been the sluggish demand for new and used automobiles, which has made car manufacturers let their inventories of rubber fall.

São Paulo Activity

Near Araraquara, State of São Paulo, on the Fazenda Santa Sofia there were planted in 1916 twenty-six seeds of rubber trees, sent to the proprietor by General Rondon. By 1945 these had increased so that 30,000 rubber trees shielded the coffee trees against frost.

São Paulo has shown itself to be a very superior area for rubber cultivation. In Ubatuba at the State Experimental Agricultural Institute, new varieties of coffee, banana and rubber trees are grown in association with one another.

Here, too, from clones cultivated for resistance to disease and high yield productivity of from 1800 to 2300 kilos per hectare have been registered.

Brazilian Production Data

In 1955, Brazilian production of rubber was 29,498 tons, of which 3,430 tons were exported, causing the country to import 20,346 tons of crude rubber, the largest figure ever recorded. In 1956 importation dropped to about 4,045 tons.

To supply the 85,000 tons which it is estimated the country will require by 1960, the Amazon region will contribute some 30,000 tons, about 25,000 tons more will come from the plantations of Amapá and São Paulo should be able to make up the deficit of 30,000 tons.

Brazilian News and Notes

DATA MADE AVAILABLE ON SYNTHETIC RESINS

In 1956, the consumption of synthetic resin in Brazil amounted to 24,000 tons, of which 16,000 tons were manufactured domestically. With those plants in production which are now being built or projected, it is estimated that by 1959 Brazil will produce 60,000 tons of the plastic.

This project is expected to represent a saving of about US-$3,000,00 in foreign exchange.

MORE ENGLISH GROUPS SHOW INTEREST IN BRAZIL

According to recent items in the São Paulo press, representatives from English groups which include British Thompson-Houston, Metropolitan Vickers, financially coordinated by the firm of Gore & Bruce, will shortly be visiting Brazil and especially São Paulo with the object of discussing plans for investments in power, railroads and other transportation.

CONTRACTS ARE SIGNED BY CAR PARTS MAKERS

It is announced that a contract has been signed between MAC S.A. Indústria e Comércio of São Paulo and the Clark Equipment International Corporation of the United States for the manufacture of gears. A new plant is to be erected in the State of São Paulo.

Also, Walita Auto Peças S.A., plans to manufacture starter motors, generators and motors for wind-shield wipers. The new firm was recently incorporated through agreement between Elétro Indústria Walita S.A. and the Electric Autolite Company of Toledo, Ohio.

BRAZIL NUT RECIPES

The Brazil Nut Association, 100 Hudson Street, New York 13, New York, has published a thirty-two page booklet containing interesting recipes using Brazil nuts.

Brazilian Aviation Achievements Big

Its Lines Reach Every One of the Nation's Far Flung 220 Population Areas

(*From Page* 6)

bravery, the daring and the native capacity of the Brazilians who serve the commercial airlines of the country and who have given Brazil a foremost place in world aviation.

I cite as an example the case of Commander Linneu Gomes. About ten years ago he acquired Real; more recently Aerovias and Nacional. In this short period he has transformed these organizations into one of the most powerful aviation combines of South America, serving in Brazil alone most of the country's 220 cities.

Real was among the first to use the Super-Convairs four-forties. Its fleet of twenty Super-Convairs will be increased in February with the first of the most modern Super-H Constellations, all to be placed on international routes.

With the opening of its new agency in Washington, Real will have five offices in the United States. All these things are an indication of the expansion of Real in Brazil and in the world. It was a well-deserved act when my government recently presented President Linneu Gomes with a commendation of the Order of Merit for Aeronautics.

Spread Friendship

I hope that these few words have been enough to give you an idea of the expansion of Brazilian airlines in the international field.

In conclusion, let me say one more thing. The activity of these Brazilian companies is not limited to airline matters. In every land that they have offices they have collaborated with us in promoting the many good things of Brazil touristwise and tradewise. In this connection, along with REAL-AEROVIAS, must be mentioned VARIG, whose quality service is equally well known in the United States. For Europe, PANAIR do Brasil does the same excellent promotional job in the areas which it serves.

OPPORTUNITIES IN BRAZILIAN TRADE

The Brazilian Government Trade Bureau has received the following inquiries from businessmen in Brazil, who desire to export or import the products listed below. These inquiries are published as received and no representation is made as to standings of listed firms. We suggest that the parties interested write directly to these firms, via airmail, as well as to this office, at 551 Fifth Avenue, New York 17, N. Y.

BUYERS WANTED

CASTOR BEANS, DENDÊ (PALM) NUTS AND OIL, SISAL FIBER AND TOW — Renato Pacote, Caixa Postal 143, Cable Address: "Sazonar", Salvador, Bahia, Brazil.

BRAZILIAN PINE — Maron Neto, Caixa Postal 1620, Cable Address: "Maroneto", Curitiba, Paraná, Brazil.

COFFEE, COCOA, CASTOR BEANS, SISAL FIBER, WOODS, SUGAR, SHREDDED COCONUT, IPECAC SALTS, AND ORES — Expanbras Ltda., Rua D. Gerardo 46, sala 303, Rio de Janeiro, Brazil.

COTTON, WOOL AND RAYON TEXTILES, WAXES, ANIMAL HAIR, OILS, WILD ANIMAL SKINS, RAMIE AND PIASSZVA FIBERS, AND PLYWOOD — Interlatina Importadora Exportadora Ltda., Caixa Postal 4377, Cable Address: "Interlatina", Rio de Janeiro, Brazil.

BLACK BEANS, SOJA BEANS, BEESWAX — Glitz S/A Importadora e Exportadora, Caixa Postal 598, Cable Address: "Alfredinho", Pôrto Alegre, Rio Grande do Sul, Brazil.

WOODCRAFT—Fermaco S/A, Caixa Postal 1804, Cable Address: "Fermacosa", Curitiba, Paraná, Brazil.

STAR FLOWERS — Importadora e Exportadora Transatlântica Ltda., Caixa Postal 2868, São Paulo, Brazil.

SPARK PLUGS, FIBER GLASS, AND VETERINARY PRODUCTS — Onex Comércio, Importação e Exportação Ltda., Avenida Nilo Peçanha 12, 10o. andar, sala 1016, Cable Address: "Onexim-port", Rio de Janeiro, Brazil.

WOODCRAFT — Iochpe S/A, Caixa Postal [illegible], Cable Address: "Pinho-brasil", Pôrto Alegre, Rio Grande do Sul, Brazil.

LADIES' CLOTHING — Ernesto Boas & Cia. Ltda., Caixa Postal 681, Campinas, São Paulo, Brazil.

LADIES' FOOTWEAR — Rui Chaves Cia., Caixa Postal [illegible], Novo Hamburgo, Rio Grande do Sul, Brazil.

WOMEN'S WEAR AND ACCESSORIES—Gantry S/A, Caixa Postal 67, Petrópolis, Estado do Rio de Janeiro, Brazil.

"TRADE OPPORTUNITIES"
for American firms

The Brazilian Government Trade Bureau also accepts advertisements from U.S. firms wishing to reach interested parties in Brazil in its weekly "BOLETIM AMERICANO", in Portuguese, widely distributed in Brazil. U.S. firms wishing to import Brazilian products and desiring to use these facilities are invited to write to: Brazilian Government Trade Bureau, 551 Fifth Avenue, New York, New York.

STRAW AND WOOD HANDICRAFTS—Sydney Baroni Ricci, Praça 15 de Novembro 59, Serra Negra, São Paulo, Brazil.

WOODEN UMBRELLA HANDLES—Exportadora e Importadora Sobrassal Ltda., Rua México 148, 3o. andar, sala 301, Cable Address: "Tapinho", Rio de Janeiro, Brazil.

BROOM STICKS—Lindolfo Sichero, Praça Rui Barbosa 537, 3o. andar, Ap. 6, Curitiba, Paraná, Brazil.

SELLERS WANTED

IRON, METALS, PHARMACEUTIC AND INDUSTRIAL CHEMICALS — Onex Comércio, Importação e Exportação Ltda., Avenida Nilo Peçanha 12, 10o. andar, sala 1016, Cable Address: "Onexim-port", Rio de Janeiro, Brazil.

CAUSTIC SODA, GUM ROSIN, AND SODA ASH — T. Maron Neto, Caixa Postal 1620, Cable Address: "Maroneto", Curitiba, Paraná, Brazil.

SPLIT PEAS — Silva, Nascimento & Cia., Caixa Postal 7673, Cable Address: "Xingu", São Paulo, Brazil.

INDUSTRIAL MACHINERY AND EQUIPMENT — Empreendimentos Unidos do Brasil Ltda., Rua 7 de Abril 105, 7o. andar, Conj. 71-A, São Paulo, Brazil.

POTASSIUM CHLORIDE AND AMMONIUM SULPHATE—Irmãos Iochpe S/A, Caixa Postal 1870, Cable Address: "Pinhobrasil", Pôrto Alegre, Rio Grande do Sul, Brazil.

TRUCK AND AUTO PARTS, INDUSTRIAL AND MARINE ENGINES—Exportadora Maranhense de Peles, Ltda., Caixa Postal 288, Cable Address: "Guará", São Luiz, Maranhão, Brazil.

REPRESENTATIVES

Wishes a representative to sell its sugar cane alcohol "brandy" — Companhia Federal de Administração, Avenida Presidente Vargas 435, 21o. andar, Cable Address: "Contract", Rio de Janeiro, Brazil.

Wishes a representative to sell its woolen stoles — Aiach & Filhos Ltda., Avenida do Estado 7685/7695, São Paulo, Brazil.

Wishes to represent American manufacturers of the following products: electrodes, siliceous steel plates, tin plate, electrolytic cables, caustic soda cutlery, hunting and fishing equipment, tallow distilling machinery, and industrial refrigerating equipment — Commercial Clovis Carvalho, Rua Florência de Abreu 36, 6o. andar, sala 607, São Paulo, Brazil.

Wishes a representative to sell its Dresden china figures, made in Brazil as well as its bitters, gin, rum, honey and canned hearts of palm, vegetable and meat products — Importadora de Produtos, Químicos e Alimentícios Bonafide Ltda., Caixa Postal 1088, Pôrto Alegre, Rio Grande do Sul, Brazil.

Wishes a representative to sell its cotton yarns and textiles — Santos, Delorme, Ltda., Rua Barão de São Felix 44 — Loja. Cable Address: "Lomersan", Rio de Janeiro, Brazil.

Wishes a representative to sell its rum, sugar cane alchohol "brandy" coffee and cocoa liqueurs and creams — Bebidas Finas Engelmann Ltda., Caixa Postal 63, Cable Address: "Engel", São Paulo, Brazil.

Wishes a representative to sell its tulle for all purposes, laces, curtains, for tapestry — Fábrica de Filó S/A, Caixa Postal 18, Cable Address: "Filó-Novafriburgo", Nova Friburgo, Estado do Rio de Janeiro, Brazil.

MISCELLANEOUS

Certified timber expert offers his services for the buying and/or inspection of sawn Paraná pine, plywood, hardwood and logs—T. Van den Berg, Caixa Postal 2480, Curitiba, Paraná, Brazil.

Offers for sale plots of land in the municipality of Juquia, near the city of São Paulo—Eduardo Melchert Grell, Caixa Postal 1753, Cable Address: "Cerveira p/Eduardo", São Paulo, Brazil.

A Brazilian firm established along the highway between Santos and São Paulo, with Cr$20,000,000 of capital and 45,000 square meters of property, needs machinery and technical know-how to establish a new industry: b) An industry specializing in the manufacturing of electrical heaters, ventilators, exhausts and suction equipment is looking for capital, technical know-how and patents on parallel products — Escritório Fernando Vergueiro, Rua São Bento 279, 7o. andar, Conj. 701-9, São Paulo, Brazil.

Offers for sale a tannery in the State of São Paulo, with houses, tanks, motors, and all equipment required to prepare some 400 to 450 cow-hides per month. The tannery is in operation with good returns—Honorato Menon, Caixa Postal 8790, São Paulo, Brazil.

Brazilian firm offers trips and safaris in the inland state of Mato Grosso-Organização Brasileira de Engenharia Ltda. Caixa Postal, 231 Cuiabá, Mato Grosso, Brazil.

A Brazilian firm wishes to contact American manufacturers which have patents of rubber goods, specially those used in the automobile industry, and are willing to permit their manufacturing in Brazil either by selling those patents, or on a royalty basis — Borbonite S/A, Rue Ramiro Barcelos 470, Cable Address: "Borbonite", Pôrto Alegre, Rio Grande do Sul, Brazil.

Offers for sale plots of land in Foz do Iguassu, State of Paraná — Sociedade Cacic Limitada, Rua Voluntários da Pátria 323, sala 123, Cable Address: "Cacick", Pôrto Alegre, Rio Grande do Sul, Brazil.